



National Park Service 2010 Resource Information Management Conference



ArcGIS: TIPS AND TRICKS

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ESRI Washington, DC

Session Overview

- **How to Get Started**
 - ArcGIS software choices – from Desktop to Web
- **ArcMap Tips and Tricks**
 - Better maps for print and web
 - Editing
 - Presenting results analysis
- **ArcCatalog Tips and Tricks**

How to Get Started

- How can I easily view and interact with my data?



ArcView
ArcEditor
ArcInfo

Desktop



ArcReader



ArcGIS Explorer

Online



Web Applications

Mobile

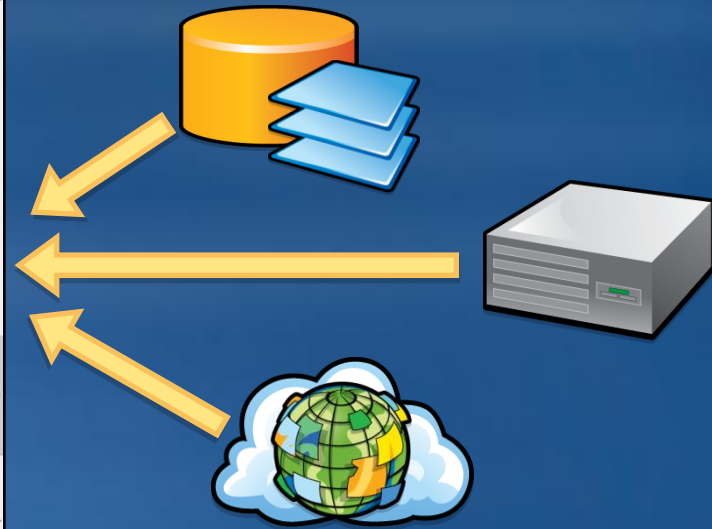
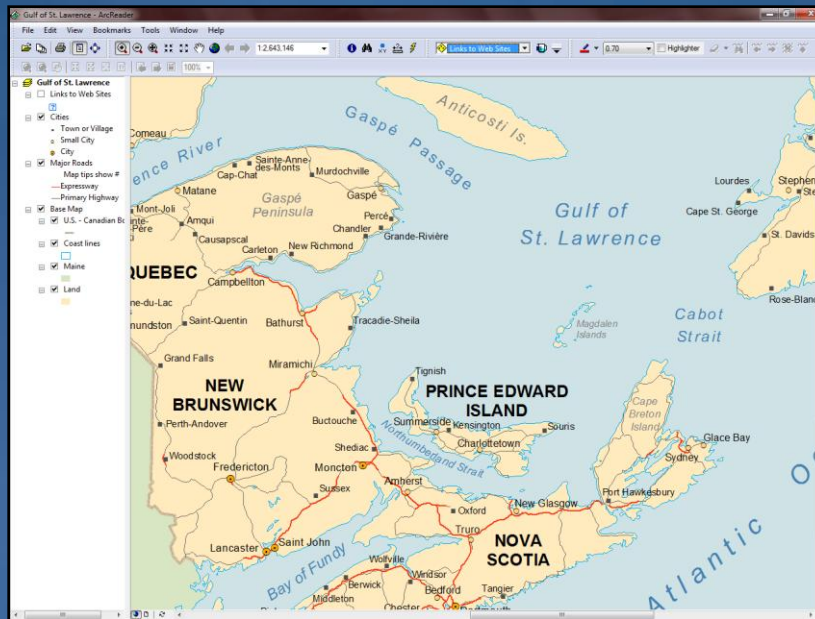


ArcGIS Mobile

ArcPad

ArcReader

- Free, downloadable reader that views, explores, and prints published maps
 - You need to have access to the data in the map



- You cannot add data to the map

ArcGIS Explorer

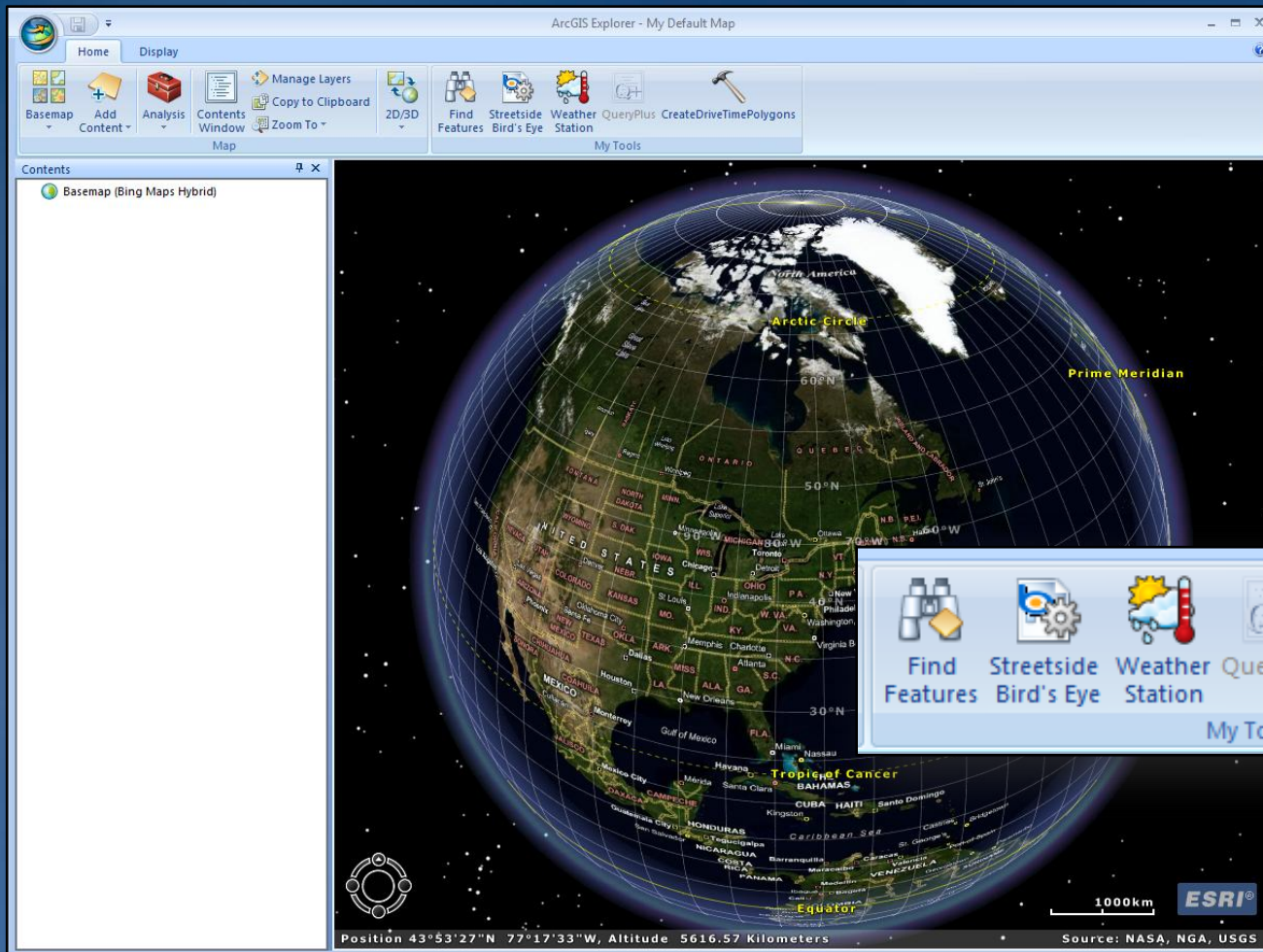
- Free downloadable viewer to explore, visualize, and share GIS information



- Add local data and GIS services

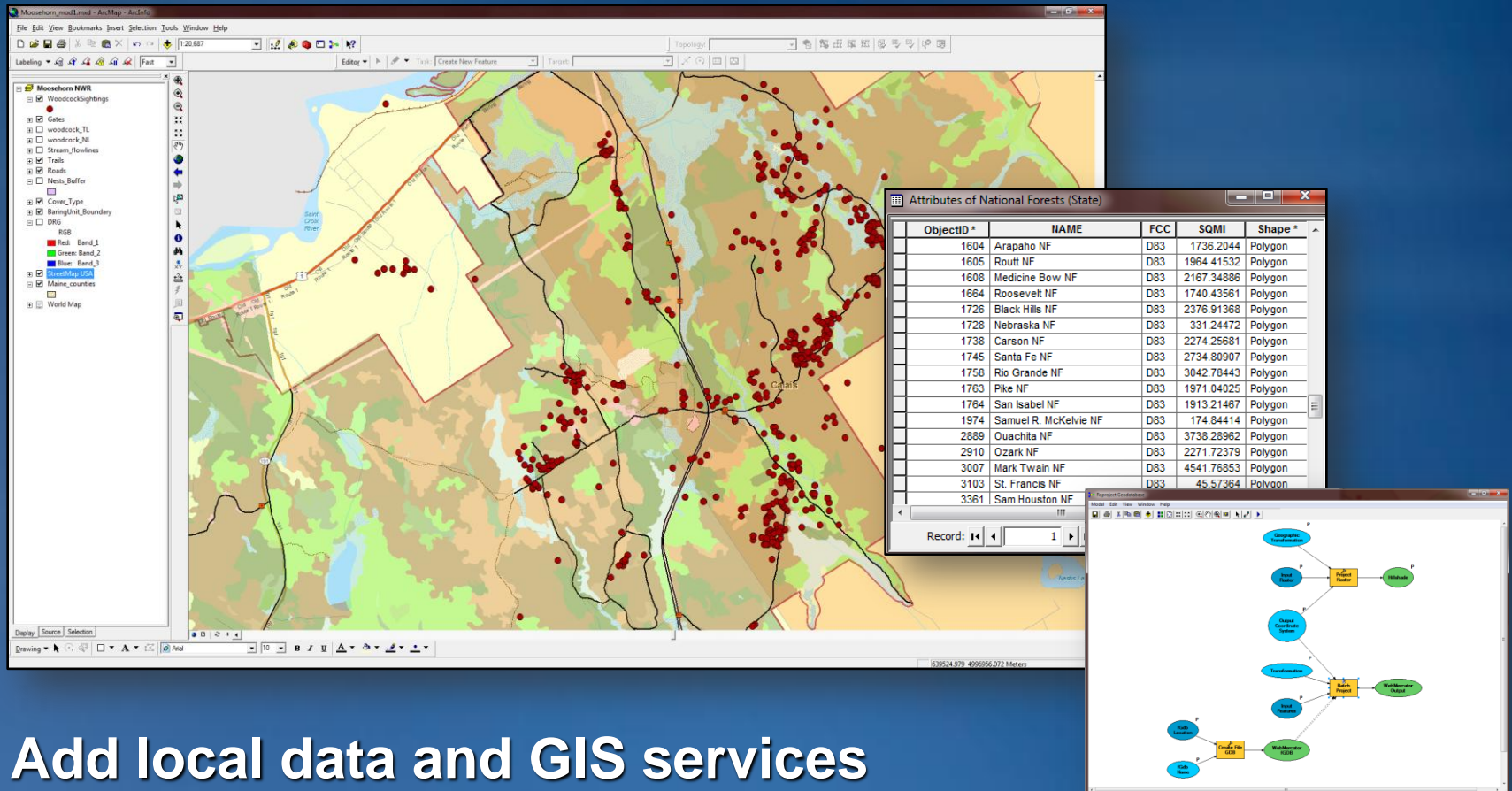
ArcGIS Explorer

- Customize interface, add Analysis Tools



ArcGIS Desktop - ArcMap

- GIS for visualizing, managing, creating, and analyzing data



- Add local data and GIS services

Resources

- ArcGIS Online



ArcGIS Online

BETA

Sign In

[Share](#)
[Find](#)
[Create](#)
[Build](#)

Share your work with others

Add a map, include a brief description and tags, and share it with everyone or specific groups of people.

Search

Search for Content

Go

[All](#) [Maps](#) [Layers](#) [Services](#) [Tools](#)

What is ArcGIS Online?

See what you can do with ArcGIS Online.



For the latest news visit the [ArcGIS Online blog](#).

Create a Web map



It only takes a few minutes and mouse clicks to [create an online Web map](#).

Or build your own Web map with:

- [JavaScript](#)
- [Flex](#)
- [Silverlight](#)

Upload and share your data

Sign up now

[Start adding](#) your maps, layers and tools and [share them](#) with others.

See ESRI Maps and Data

Imagery, streets, topo and more...



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[Forums](#) | [Blog](#) | [Help](#)

Internet | Protected Mode: On

  115% 

ArcGIS Online – Basemap Gallery

ESRI ArcGIS Online services for people using 9.3 or more recent

Click on a layer file to automatically add it into your map.

[World Imagery \(new and updated!!\)](#)



[Description](#)

[World Street Map \(new and updated!!\)](#)



[Description](#)

[World Topographic Map \(new and updated!!\)](#)



[Description](#)

[Bing Maps](#)



[Description](#)

[World Terrain Base](#)



[Description](#)

[World Shaded Relief](#)



[Description](#)

[World Physical Map](#)



[Description](#)

[US Topo Maps](#)



[Description](#)

[DeLorme World Basemap](#)



[Description](#)

[Demographics](#)



[Description](#)

[World Political Map](#)



[Description](#)

[World Events Imagery](#)



[Description](#)

ArcMap



[Bing Maps Aerial](#)



[Bing Maps Hybrid](#)



[Bing Maps Road](#)



[World Imagery](#)



[World Topography](#)



[World Streets](#)



[Boundaries and Places](#)



[World Physical](#)



[World Terrain](#)

ArcGIS Explorer

ArcGIS Online – Maps

- Search and Discover

The image shows a screenshot of the ArcGIS Online website in a Windows Internet Explorer browser window. The browser's address bar shows the URL: <http://www.arcgisonline.com/home/search.html?ts=content&f=typekeywords:map>. The page title is "ArcGIS Online - Search Results". The search bar contains the text "national park" and a "Go" button. Below the search bar, there are tabs for "All", "Maps", "Layers", "Services", and "Tools". The main content area displays search results for "national park" filtered by Maps, showing 6 items. The first item is "Yellowstone Fires 1988" by mfrates (June 16, 2009), which is a Map Document showing the proximity and extent of 1988 fires in Yellowstone National Park. The second item is "World Topographic Map" by esri (July 7, 2009), which is a Map Service showing boundaries, cities, water features, physiography, parks, landmarks, transportation, and buildings. The third item is "USA Topographic Maps (Old)" by esri (March 9, 2009), which is a Map Service showing land cover imagery for the world and detailed topographic maps of the United States at multiple scales. The left sidebar shows a list of search results for "national park" filtered by Maps, showing 6 items. The first item is "San Bernardino County Imagery" by esri (April 20, 2009), which is a Web Map showing high-resolution imagery for San Bernardino County, California, overlaid on satellite imagery. The second item is "Portugal Imagery" by esri (April 19, 2009), which is a Web Map showing high-resolution imagery for the country of Portugal, overlaid on satellite imagery. The third item is "USA Median Household Income" by esri (April 19, 2009), which is a Web Map showing median household income for the United States, overlaid on shaded relief imagery. The fourth item is "ISD Location" by paulserver2 (July 13, 2009), which is a Web Map showing the location of the State of Alabama Department of Finance, ISD, Folsom, King Street, Capitol. The fifth item is "Kenitra, Morocco" by delage_dem (July 30, 2009), which is a Web Map showing imagery of Kenitra, Morocco. The sixth item is "Portland Base Maps" by keithm (August 5, 2009), which is a Web Map showing base map set for Portland, Oregon. The bottom of the page shows the "Terms of Use | Privacy | Contact Us" link.

ArcGIS Online - Search Results - Windows Internet Explorer

http://www.arcgisonline.com/home/search.html?ts=content&f=typekeywords:map

File Edit View Favorites Tools Help

ArcGIS Online - Search Results

ArcGIS Online BETA

Home

Search results filtered by Maps - 729 items

Search for Content national park Go

All Maps Layers Services Tools

San Bernardino County Imagery by esri (April 20, 2009)

This map presents high-resolution imagery for San Bernardino County, California, overlaid on satellite imagery for the county.

Tags: San Bernardino County, California, imagery, sub-meter, aerial, 2007

Type: Web Map

Open

Portugal Imagery by esri (April 19, 2009)

This web map presents high-resolution imagery for the country of Portugal, overlaid on satellite imagery for the country.

Tags: Portugal

Type: Web Map

Open

USA Median Household Income by esri (April 19, 2009)

This web map presents median household income for the United States, overlaid on shaded relief imagery for the United States.

Tags: United States, median, income, 2007, 2008, household

Type: Web Map

Open

ISD Location by paulserver2 (July 13, 2009)

Tags: montgomery, state of alabama, department of finance, ISD, folsom, king street, capitol

Type: Web Map

Open

Kenitra, Morocco by delage_dem (July 30, 2009)

Tags: Kenitra, Morocco, Imagery

Type: Web Map

Open

Portland Base Maps by keithm (August 5, 2009)

Base map set for Portland, Oregon

Tags: Portland

Type: Web Map

Open

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ArcGIS Online BETA

Search for Content national park Go

All Maps Layers Services Tools

Home

Search results for "national park" filtered by Maps - 6 items

Yellowstone Fires 1988 by mfrates (June 16, 2009)

Map indicating the proximity and extent of 1988 fires in Yellowstone National Park.

Tags: Fire, Yellowstone, 1988, Forest

Type: Map Document

Open in ArcGIS

World Topographic Map by esri (July 7, 2009)

This world topographic map service includes boundaries, cities, water features, physiography, parks, landmarks, transportation, and buildings...

Tags: topo maps, topographic, topography, world, maps, topo, basemap, shaded relief, land cover, administrative boundaries, parks, landmarks, transportation, roads, highways, airports, railroads, buildings, ArcMap_base, ArcGlobe_base, ArcScene_base

Type: Map Service

Add to Web Map Open in ArcGIS Preview View Service Details

USA Topographic Maps (Old) by esri (March 9, 2009)

This map service presents land cover imagery for the world and detailed topographic maps of the United States at multiple scales.

Tags: United States, topographic, basemap, USGS, scanned, topo maps, contours, relief, physical, maps

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Forums | Blog | Help

Internet | Protected Mode: On

115%

ArcGIS Online – Layers

- Search and Discover

The image displays two overlapping screenshots of the ArcGIS Online web application interface, illustrating the search and discovery process for layers.

Top Screenshot (Search for "world"):

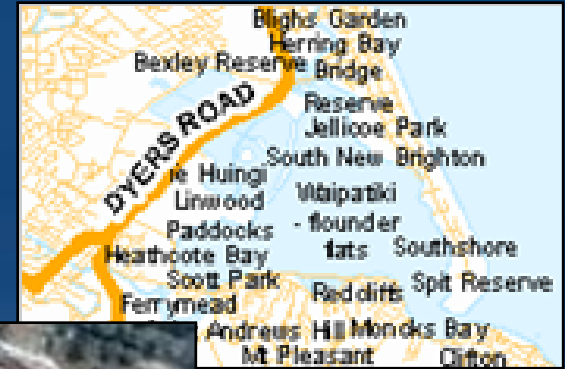
- Header:** ArcGIS Online BETA logo, "Sign In" link, and a search bar containing "world". Navigation links: All, Maps, **Layers**, Services, Tools.
- Home Section:** "Search results for 'world' filtered by Layers - 59 items".
- Search Results:**
 - World Imagery** by rvery (November 17, 2009): Packages world imagery with world transportation. Tags: world imagery. Type: Layer. [Open in ArcGIS](#).
 - World Cities** by hyjung77 (October 7, 2009): (Icon of a city). Tags: World Cities. Type: Layer. [Open in ArcGIS](#).
 - World Imagery** by arcgis_explorer (March 6, 2010): ArcGIS Explorer: World Imagery. Tags: World Imagery, ArcGIS Explorer, AGX. Type: Explorer Layer. [Open in ArcGIS](#).
 - World Population Per Country - 2005** by rcrissup: World population by country as of 2005. Tags: population, demography, world, global. Type: Layer Package. [Open in ArcGIS](#).

Bottom Screenshot (Search for "national park"):

- Header:** ArcGIS Online BETA logo, "Sign In" link, and a search bar containing "national park". Navigation links: All, Maps, **Layers**, Services, Tools.
- Home Section:** "Search results for 'national park' filtered by Layers - 21 items".
- Search Results:**
 - SJ_Public_Land** by stefanS (August 31, 2009): Tags: San Juan Islands, Public Land, DNR, Park, Open Space, National Wildlife Refuge. Type: Layer Package. [Open in ArcGIS](#).
 - Yellowstone Tour** by bszukalski (December 10, 2009): Yellowstone National Park: A tour through Yellowstone. Tags: Yellowstone, YELL, AGX. Type: Explorer Layer. [Open in ArcGIS](#).
 - Yellowstone Precipitation (with Legend)** by bszukalski (December 10, 2009): Yellowstone National Park: Greater Yellowstone area precipitation with legend. Tags: Yellowstone, YELL, AGX. Type: Explorer Layer. [Open in ArcGIS](#).
- Footer:** Terms of Use | Privacy | Contact Us | Forums | Blog | Help. Browser status bar shows "Internet | Protected Mode: On" and "115%".

ArcGIS Online – Services

- Map
- Image
- Geocoding
- Globe
- Network Analysis



Locators/TA_Address_NA	
Address:	380 New York St.
City:	Redlands
State:	CA
Zip:	92373



ArcGIS Online – Make Your Own Map

- Make your own map and share it
- Just add services to a web map

The screenshot displays the ArcGIS Online web application. At the top, the 'ArcGIS Online' header includes a search bar and buttons for 'Find', 'Add More Layers', and 'Save Map'. Below the header is a map of the United States with a wind potential overlay. A 'Save Web Map' dialog box is open, showing the title 'Wind Potential and Projected Population' and tags 'USA, Wind Potential, Projected Population'. Below the map, the 'My Content' page is visible, showing a list of items including 'US Wind Potential', 'Weatherization Model Results', and 'Wind Potential and Projected Population'.

ArcGIS Online

Search for an Address, City, or Location ... Find Add More Layers Save Map

Imagery Streets Topography Shaded Relief

Save Web Map

Title: ** Save As New Web Map **
Wind Potential and Projected Population

Tags: USA, Wind Potential, Projected Population

Save Web Map Cancel

ArcGIS Online BETA

Search for Content Go

All Maps Layers Services Tools

Home My Content My Groups

My Content

New Delete

esritosisia

Map Layers

▲ Title Type Modified Shared Size

<input type="checkbox"/>		US Wind Potential	Map Service	Sep 4, 2009	Group	1 KB
<input type="checkbox"/>		Weatherization Model Results	Layer Package	Nov 18, 2009	Group	1 MB
<input type="checkbox"/>		Wind Potential and Projected Population	Web Map	Apr 11, 2010	Not Shared	1 KB

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ArcMap Tips and Tricks

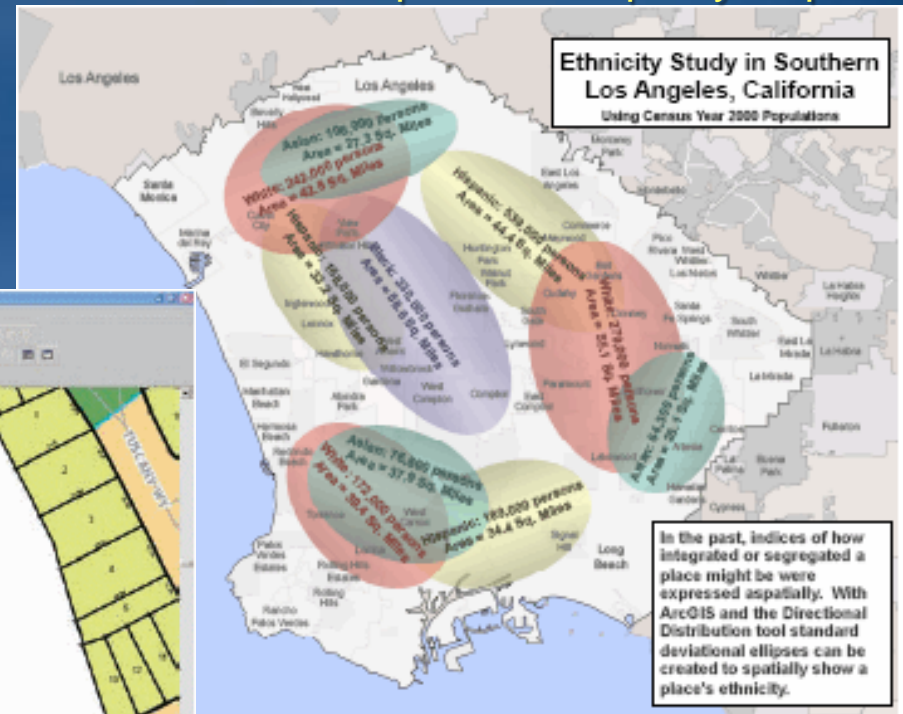
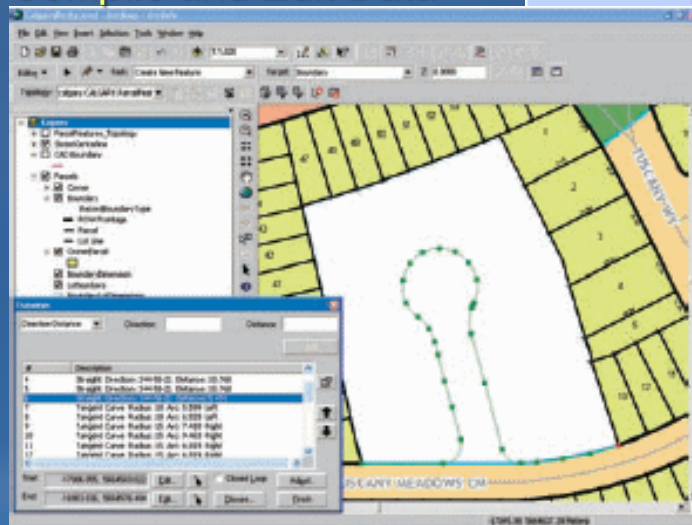
- Application properties
- Making a map for print output
- Building better basemaps
- Making a map for the web
- ArcMap tips for editing workflows

What is ArcMap?

- Comprehensive map authoring application
- Used for all map based tasks
 - Mapping and editing
 - Query and analysis
 - Creating graphs, reports, and output

Create publication quality maps

Compile and Edit Data



ArcMap application properties

- Application level properties apply to all occurrences of ArcMap in the machine
- ArcMap > Tools menu > Options
- For Example:

Option	Setting
Make newly added layers visible by default	Off
Return to last used location when Add Data dialog first used	On
Rendering behaviour on window resize	No redraw

Making a map for print



Working with layer properties

Use Scale Range to define layer visibility

Make only required features visible

Use scale range and classes for clarity

General | Source | Selection | Display | Symbology | Fields | Definition Query | Labels | Joins & Relates | HTML Popup |

Use symbols appropriate to your data and map purpose

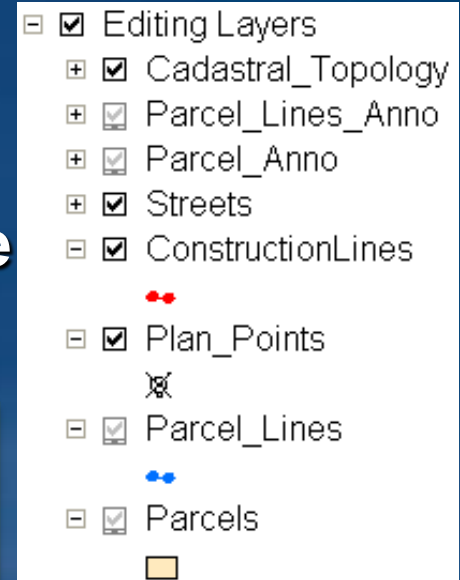
Make only required fields visible

Saving layer properties

- **Save layer properties for repeated use**

Save a layer file (.lyr)

- Add to ArcMap
- Transfer/Share

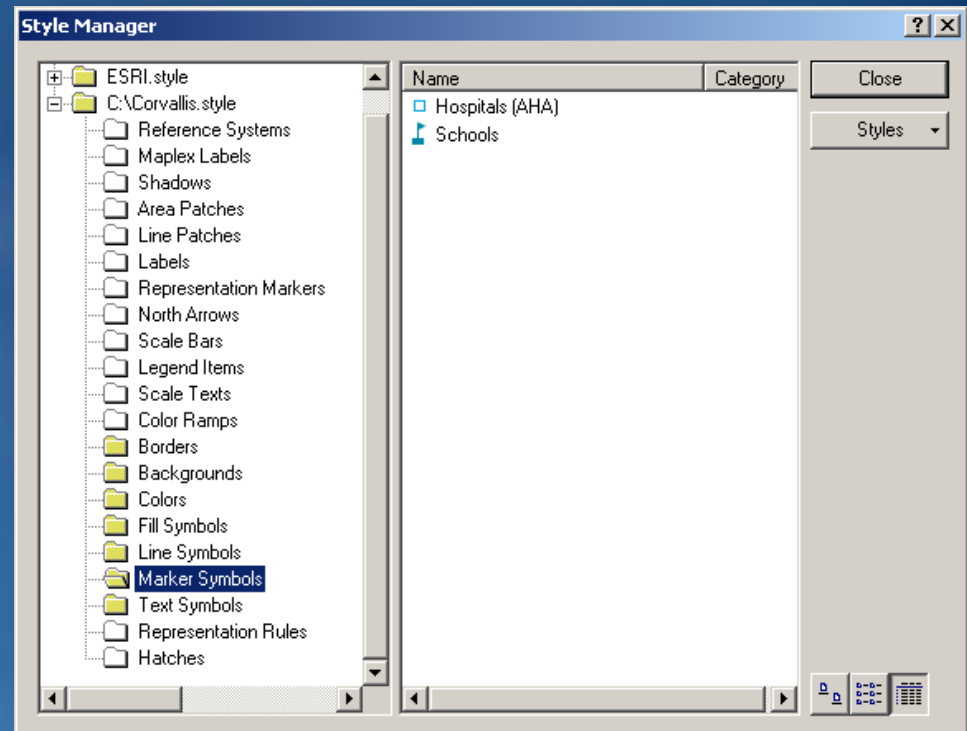


Option	Description
Layer file (.lyr)	File storage for all layer property definitions (symbols, labels, definition queries, joins, etc...) Reference feature class for geometry/attributes
Group layer file	Collection of properties from selected layers
Style file (.style)	File referencing stored symbology. Save a collection from a map or create individual custom symbols.

Open layer or group layer file directly from Windows Explorer (9.3)

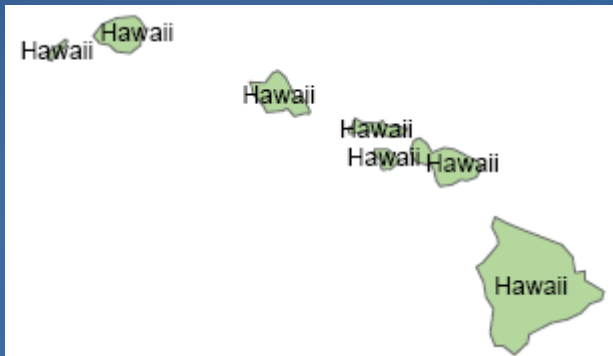
Styles

- File referencing stored symbology
 - Save a collection from a map or create individual custom symbols
- Capture the symbol, text, etc from a map document
- ArcMap > Tools > Styles
 - Style Manager
 - Export Style

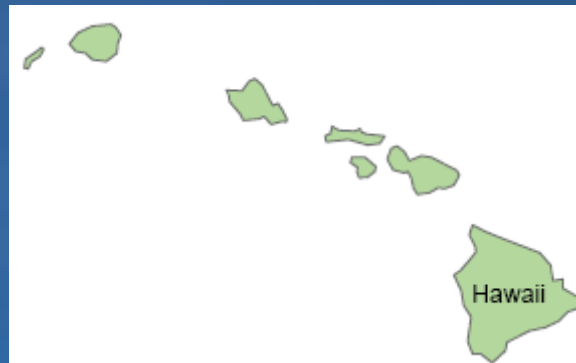


Placing with Maplex label engine

- Special set of tools that allows you to improve the quality of the labels on your map
- Define parameters to control position and size of labels
 - Parameters to calculate best placement for all the labels on your map



Compound polygons



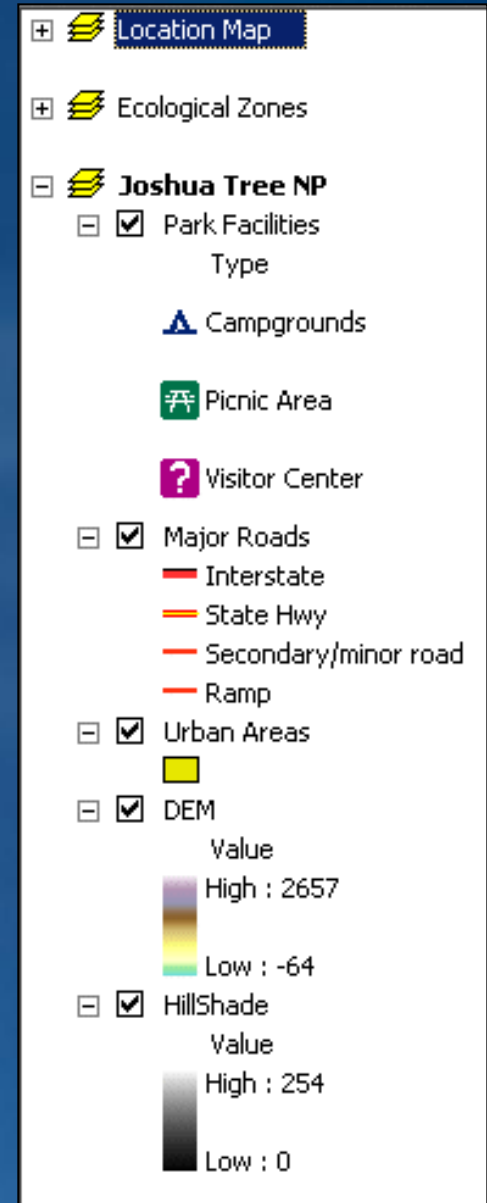
Switch from the Maplex Label Engine to the Standard Label Engine, all advanced label placement settings will be lost

Turn the Maplex Label Engine on or off for a given data frame.

Working with data frames: Data view

- **Data frames contain layers and tables**
 - Reduce number of map documents open
 - Create simple, effective maps fast!
- **Maps can have many data frames**
 - Task organization
 - Index and inset maps

Activate data frame
with Alt + Click

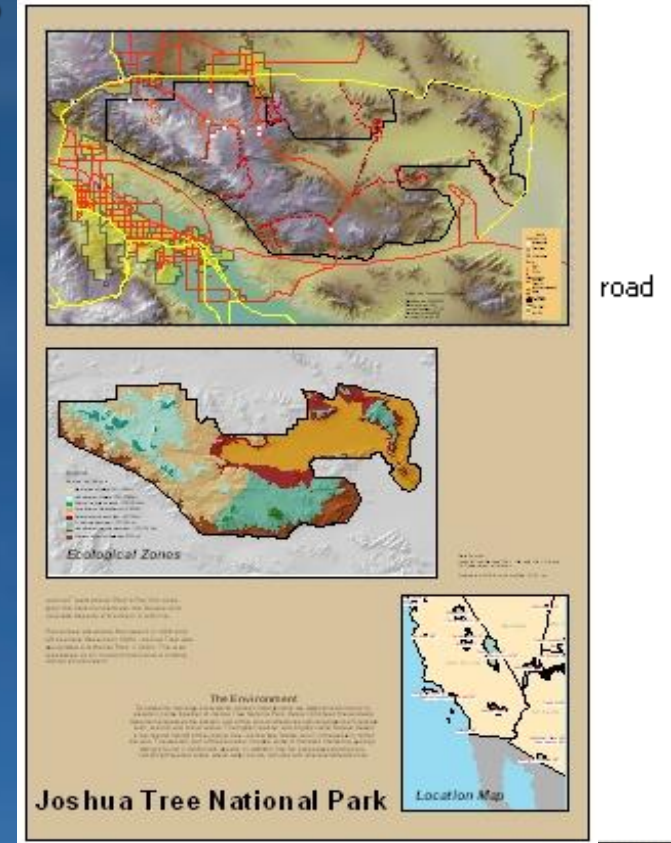
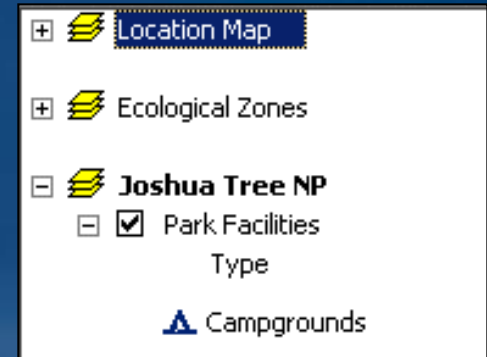


Working with data frames: Layout view

- Data frames contain layers and tables
 - Reduce number of map documents open
 - Create simple, effective maps fast!
- Maps can have many data frames
 - Task organization
 - Index and inset maps
- Arrange in Layout View

Activate data frame
with Alt + Click

Do not delete data
frame from layout

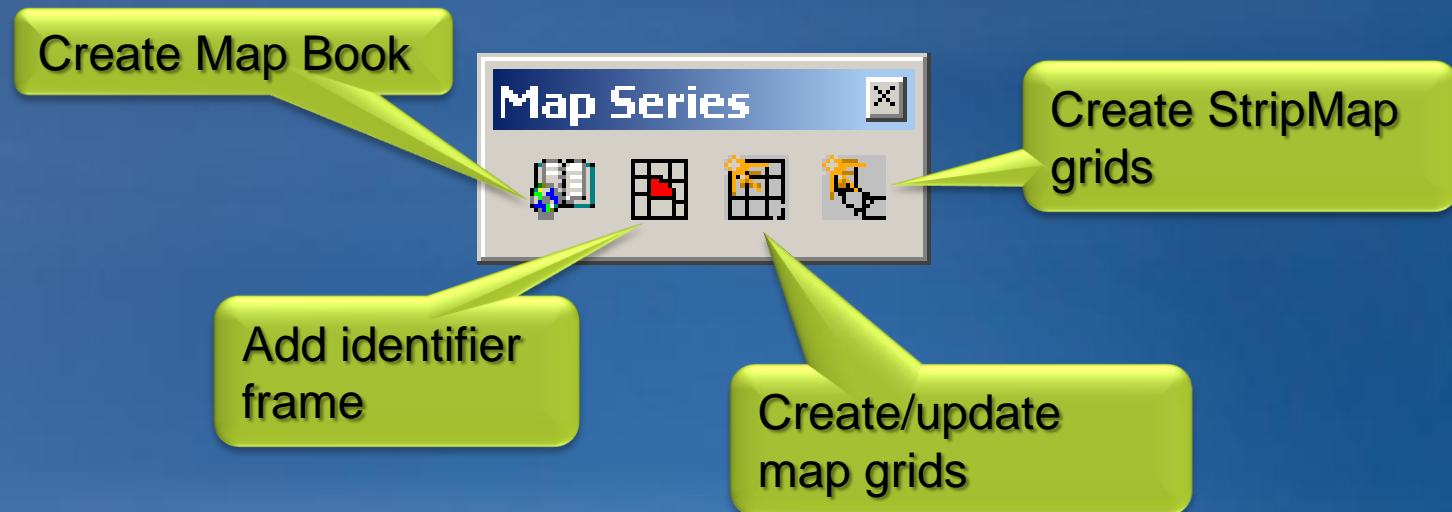


Limit the size of your print legend

- Script: **Legend Limiter** (Search in ArcScripts)
- Automatically limits symbols displayed in a categorized legend to those found in the visible extent
 - Produce maps with relevant legends
 - No more scrolling through pages of legend symbols in the table of contents

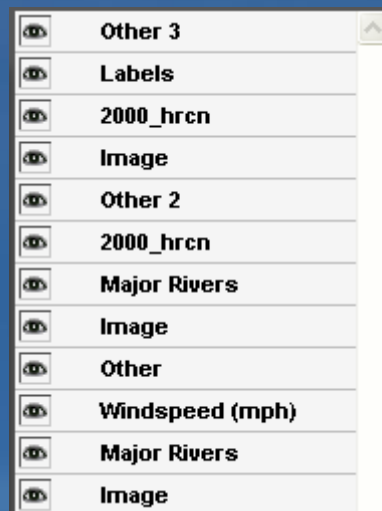
Creating a map book

- Script: **DS Map Book** (available on <http://edn.esri.com>)
- Page created in book based on each feature in a grid/index layer
- Use the Map Sheet Wizard to setup index layer
 - User specifies index layer

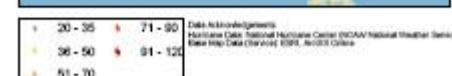
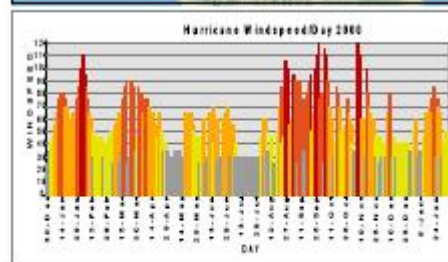
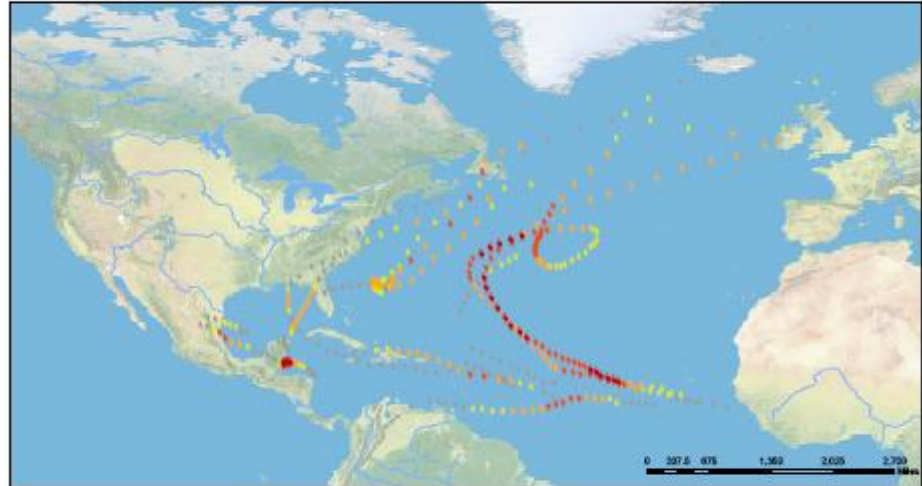


Using layered PDFs

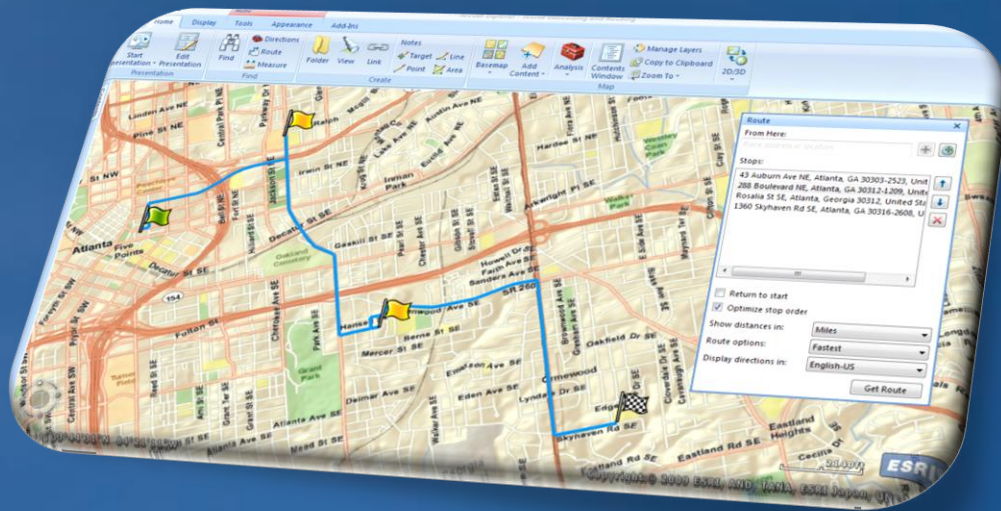
- Embedded fonts
- Change visibility of layers
- Export map georeference information
- Use Desktop help
“Advanced PDF features”



Hurricane Season 2000 Focus: Gulf of Mexico



Building Better Basemaps

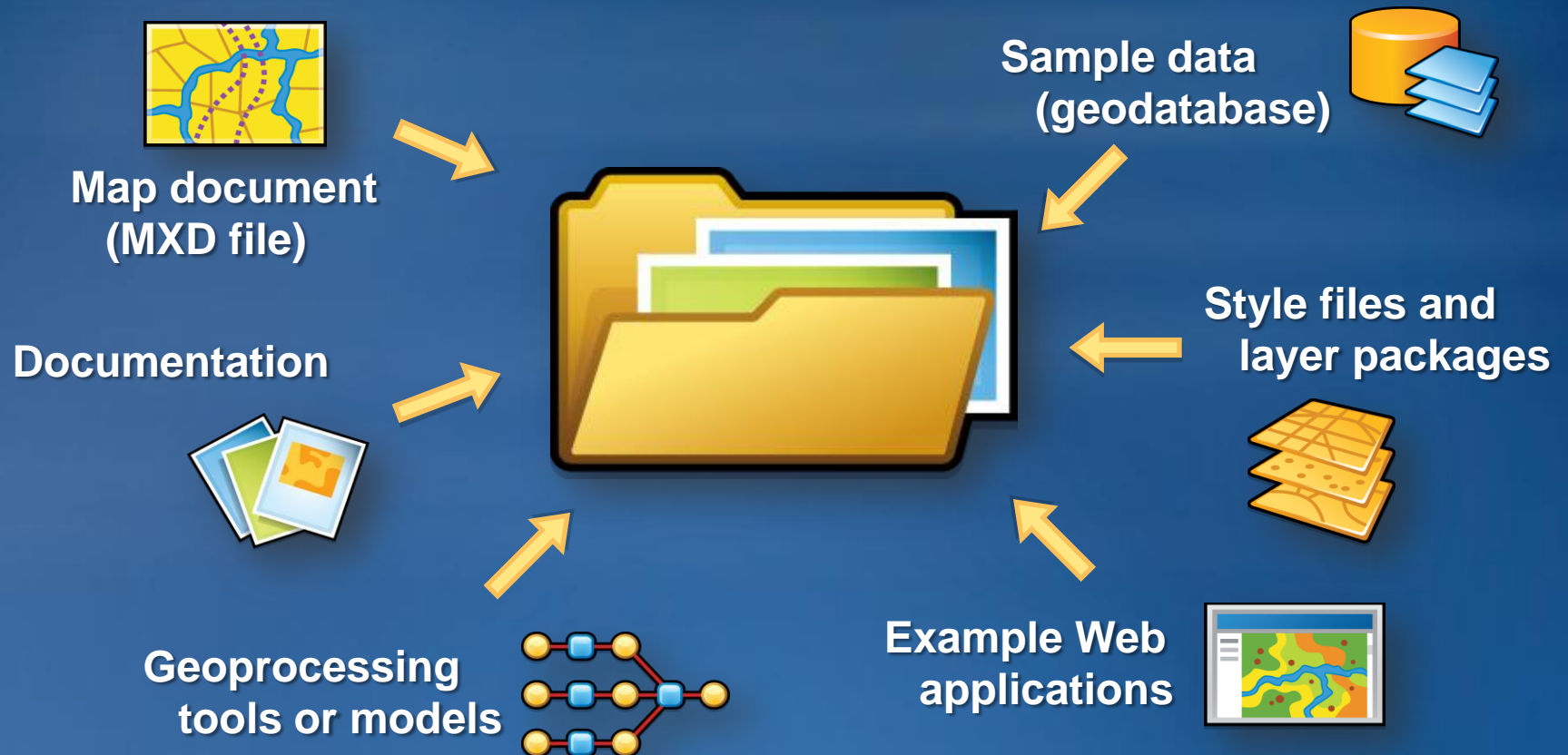


Using map templates to help you get started

- Use common maps and practices across GIS
- Help you understand what a professional cartographer would do
- Using map templates:
 1. Download template or sample from Mapping Resource Center or community pages
 2. Understand methods used to create template maps
 3. Assign your own data to the template
 4. Edit symbology (i.e. symbol classes) to match your data

Templates

- <http://resources.esri.com/maptemplates>
- A collection of resources that defines a well-designed map



DEMO

Making a map for the Web



Overview - Interactive maps

- **What is an interactive map?**
 - Map that will not be printed
 - Must respond quickly to end user requests like navigation and query
- **Where are interactive maps used?**
 - Web based maps
 - Common operating picture for managers
 - Public parcel query map
 - Maps for editing and analysis

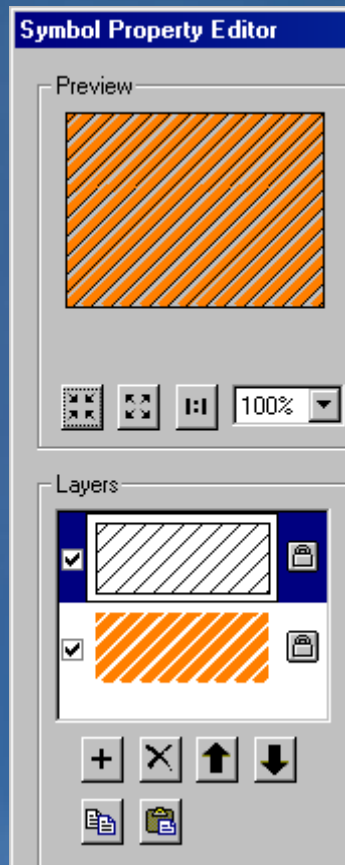
Placing text on an interactive map

- Use annotation over labels for text on the map
 - Store annotation in the geodatabase, not the map

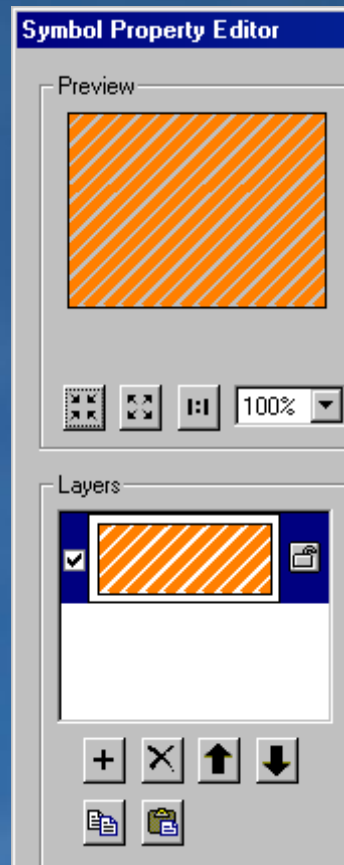
Labels	Annotation
Dynamically placed	Maintain static position
Managed as a group	Managed individually
Stored in map doc or layer file	Store in the geodatabase*
Always linked to feature	May or may not be linked to feature
Scale dependant	Scale independent

Defining fast, effective symbology

- Keep it simple and focused on the audience
- Consider using the ESRI_Optimized style



esri.style



esri_optimized.style

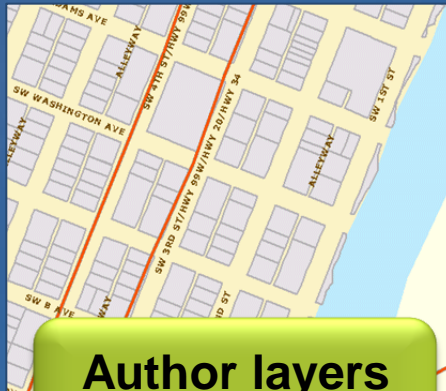
Identifying components causing poor performance

- Users will be frustrated if map rendering time is slow in interactive maps

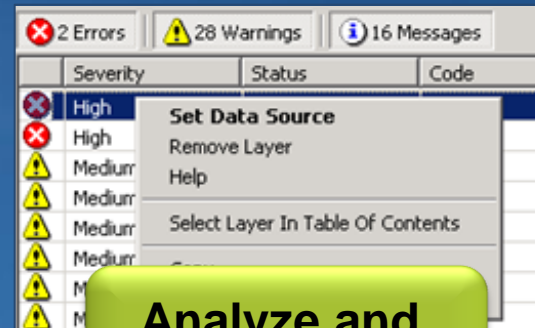


Only available
with 9.3.1

- Use **Map Service Publishing** toolbar to optimize content
 - Suggestions to aid the drawing performance in ArcMap and the Web



Author layers
in ArcMap



Analyze and
make changes

ArcMap Tips for Editing Workflows

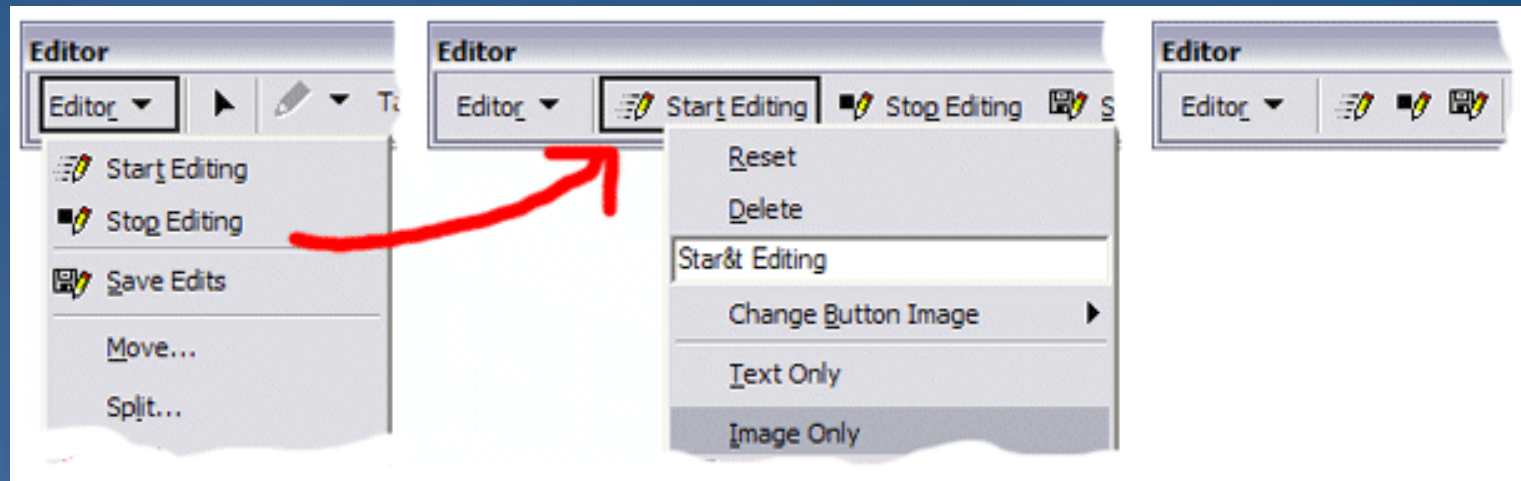


Overview

- **Efficiency**
 - Customization, Analyze map, global attribute editing
- **Control**
 - Options, Snapping, Selections
- **Navigation**
 - Bookmarks and My Places
 - Viewing windows

Efficiency - customize

- **Customize toolbars and menus**
 - Make commonly used buttons and commands more accessible



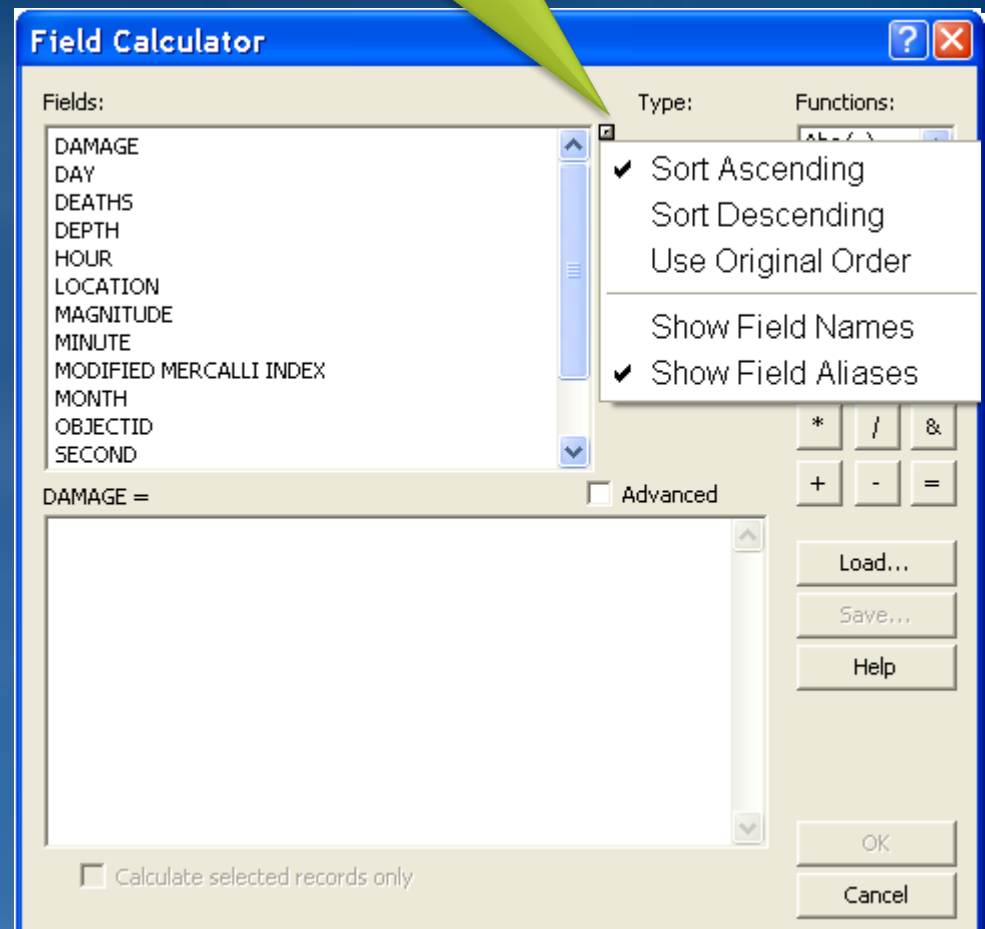
- **View > Toolbars > Customize**
 - Toolbars, commands, hot keys

Hold down CTRL
key to move toolbars
without docking

Efficiency - global attribute editing

- Field Calculator (Table)

**Tiny Control...
HERE**

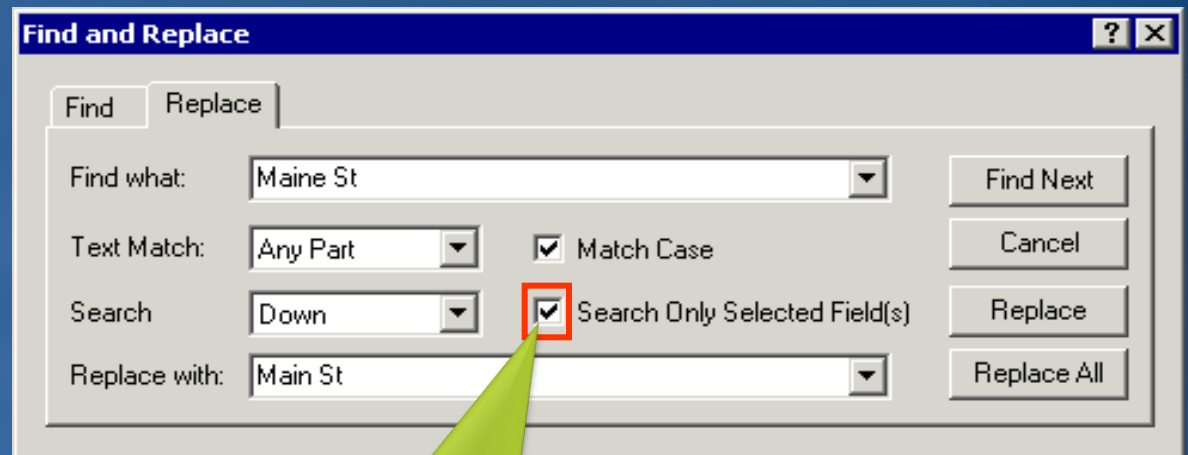


Efficiency - global attribute editing

- **Field Calculator (Table)**
- **Find and Replace (Table)**
 - Options > Find and Replace

Quick fix for spaces
Replace “_ _” with “_”

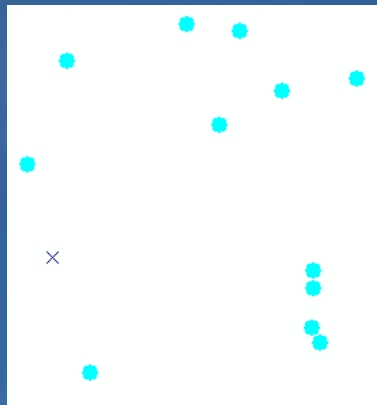
Faster than
Field Calculator



Search only selected field(s)

Efficiency - global attribute editing

- Field Calculator (Table)
- Find and Replace (Table)
- Attribute Editor
 - Interactive updates



Attributes

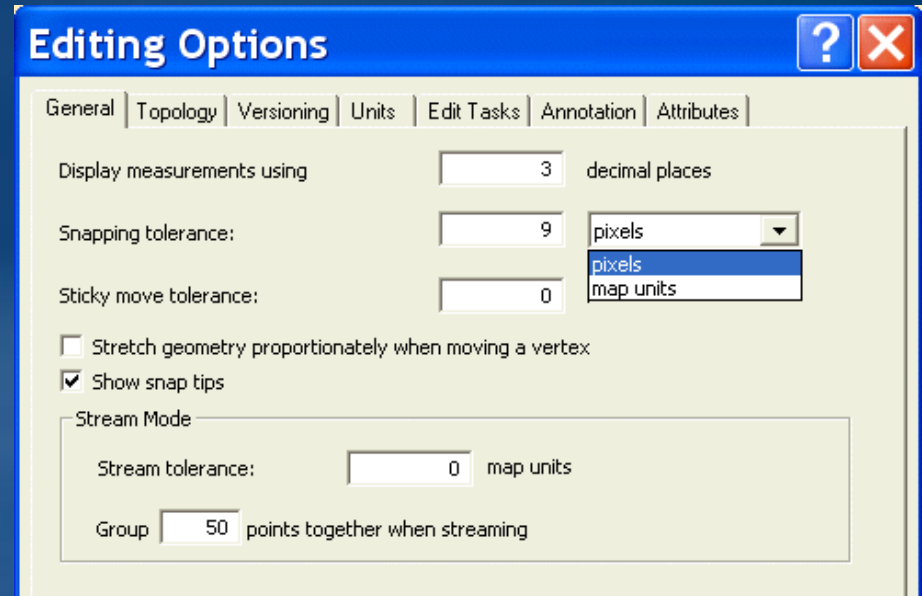
Edit selection group

Property	Value
OBJECTID	
ID	
KDOTNO	
CITYSTRUNO	
DESCRIBED	
LOCATION	
JUR_AUTH	
SWMMP_NO	
CNTY_NO	22

15 features

Editing environment

- **Sticky move tolerance**
- **Snapping**
 - Tolerance, Snap Tips
 - Snap back to the sketch
 - Lower part of menu
- **Selections**
 - Selections tab, right click
 - Selection anchor



**Suspend snapping
with Space Bar**

**Cycle through
selected features "N"**

Bookmarks and My Places

- **Bookmarks**
 - Save/Load extents between data frames and maps (9.3)
- **My Places**
 - Create and use between map documents

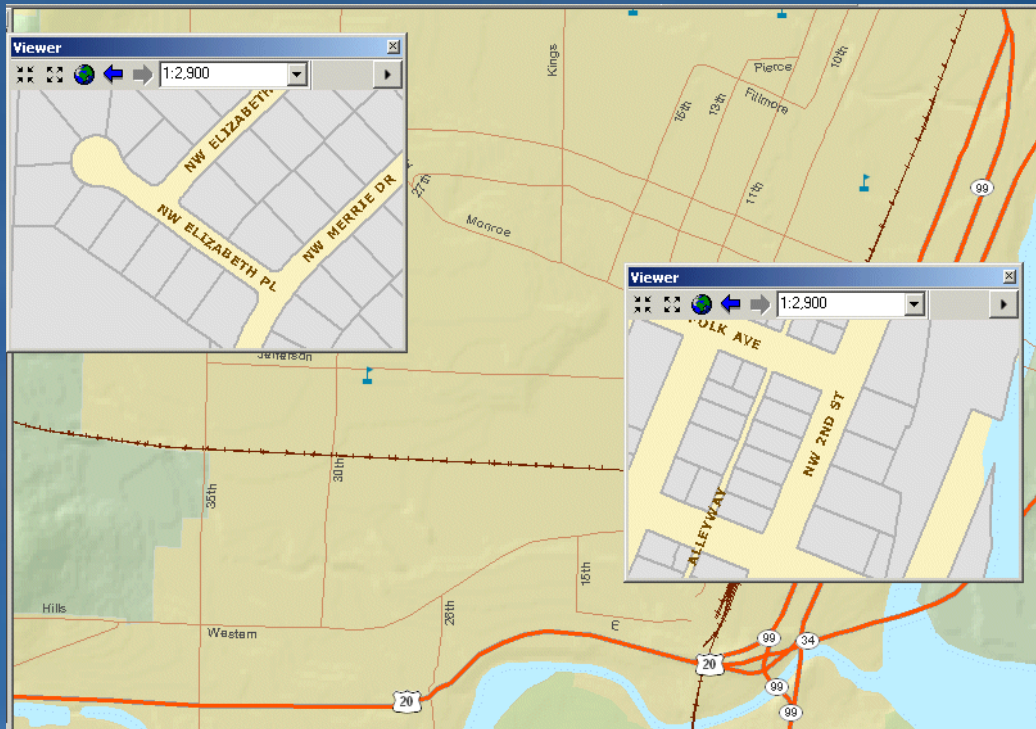
	Bookmarks	My Places
Storage	Map document	External file
Access	Single map document	Any supporting application
Contents	Spatial extents	Locations, addresses, features, spatial extents
Define	Manually	Manually, address locator, local/service based data

Viewing windows

- Overview, Magnifier, and Viewer windows permit efficient navigation and detailed editing

Use Viewer windows to edit or measure disconnected locations

You can display different data frames in each viewer window



ArcCatalog Tips and Tricks

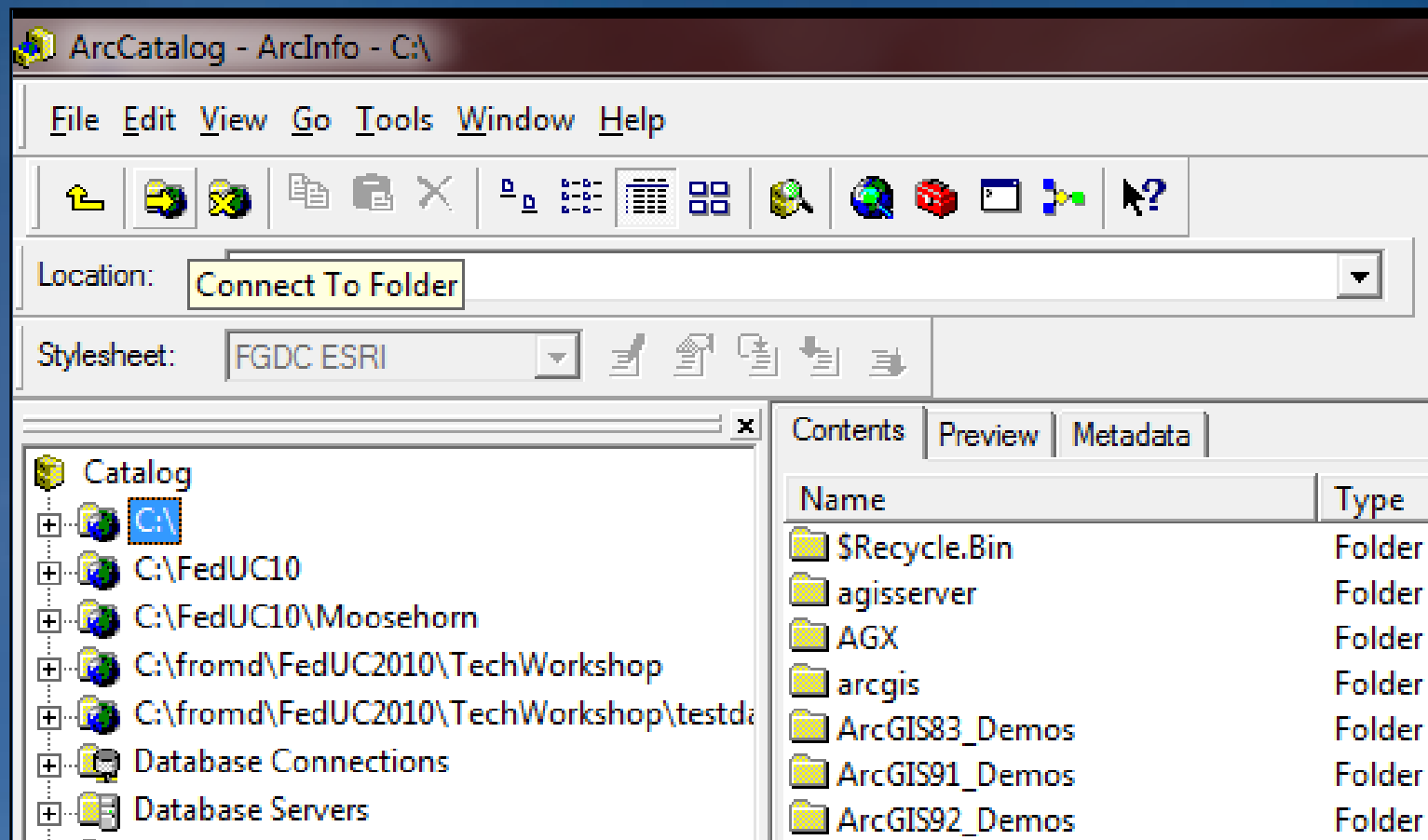
- ArcCatalog shortcuts
- Creating thumbnails for metadata
- Data Models – where to find them
- Other resources

ArcCatalog Shortcuts



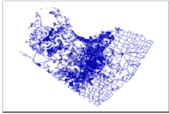
Creating Shortcuts in ArcCatalog

- Nice alternative to navigating through directory structure



Creating Thumbnails for Metadata



U.S. and Canada Streets Cartographic		
File Geodatabase Feature Class		
Description	Spatial	Attributes
		
<p>..., interstates, highways, major roads, streets, transportation, location ed States, Canada 2003</p>		
Description		
Abstract U.S. and Canada Streets Cartographic represents detailed streets, interstate highways, and major roads within the United States and Canada.		
Purpose U.S. and Canada Streets Cartographic provides streets with a reduced number of attributes and features that are designed to support cartographic display.		
Supplementary Information Largest scale when displaying the data: 1:100,000.		
Status of the data		
Time period for which the data is relevant		
Publication Information		

Creating Thumbnails for Metadata

- Visual reference for data layers

The screenshot displays the ArcCatalog application window. The left pane shows a hierarchical file tree with the 'Buildings' layer selected under 'City'. The center pane shows a map preview of the selected layer. The right pane shows the metadata for the 'Buildings' layer, with the 'Preview' tab selected. A red circle highlights the 'Preview' tab, and another red circle highlights a thumbnail image of the map data. The metadata panel includes the following information:

Buildings

Data format: File Geodatabase Feature Class
File or table name: Buildings
Coordinate system: Lambert Conformal Conic

FGDC and ESRI Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)
- [Geoprocessing History](#)
- [Binary Enclosures](#)

Metadata elements shown with blue text are defined in the Federal Geographic Data Committee's (FGDC) *Content Standard for Digital Geospatial Metadata (CSDGM)*. Elements shown with green text are defined in the *ESRI Profile of the CSDGM*. Elements shown with a green asterisk (*) will be automatically updated by ArcCatalog. ArcCatalog adds hints indicating which FGDC elements are mandatory; these are shown with gray text.

Identification Information:

Citation:

Citation information:

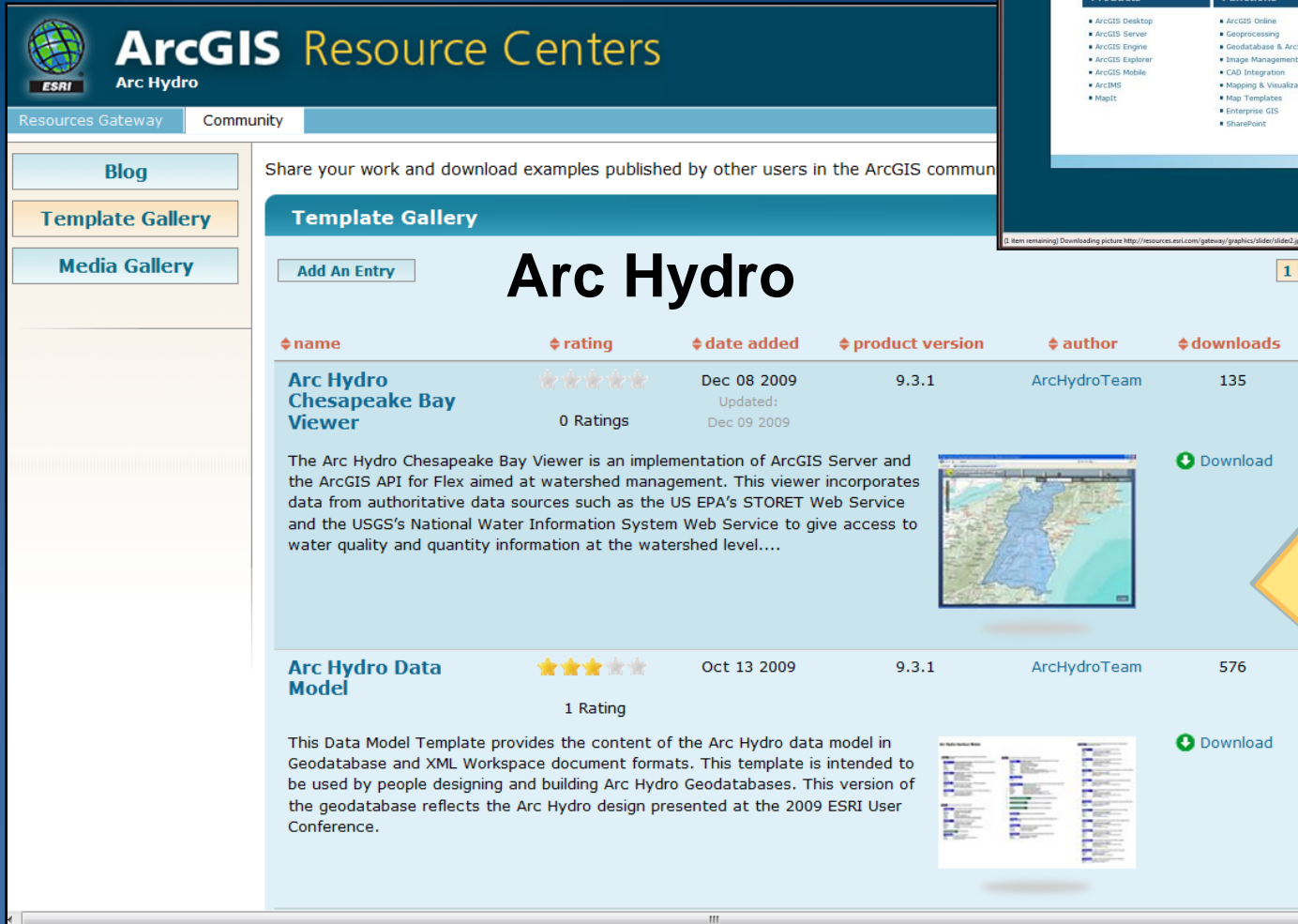
- *Title: Buildings
- *File or table name: Buildings
- *Geospatial data presentation form: vector digital data
- *Online linkage: \\TSHALL4\C\$\fromd\seminars\betterMaps\mDemo1\Data\Austin.gdb

Data Models from ArcGIS Online



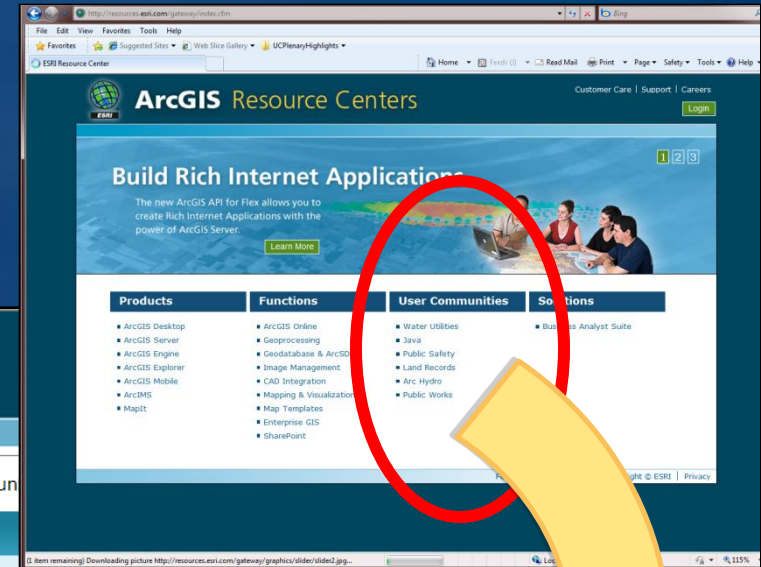
Where to find Data Models

- <http://resources.esri.com>
- User Communities



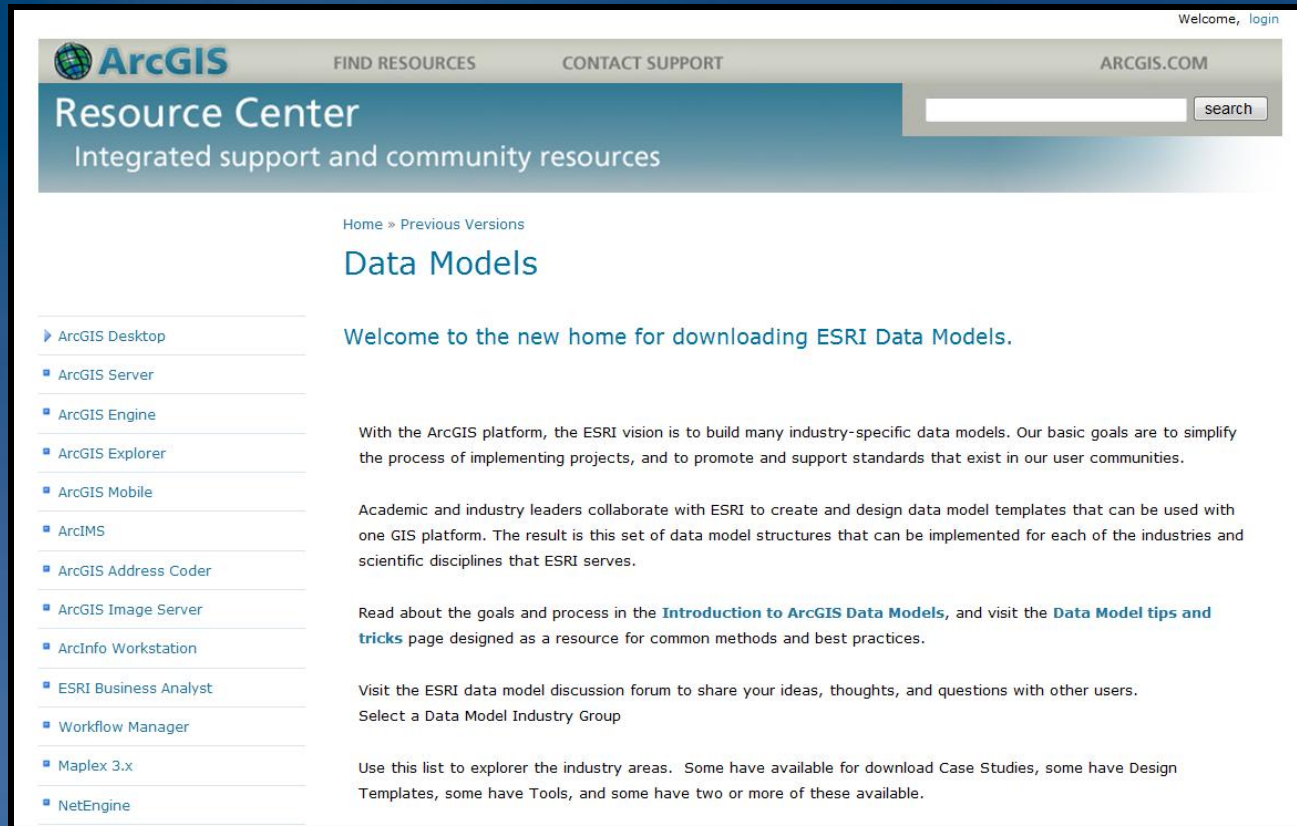
The screenshot shows the ArcGIS Resource Centers website. The main header features the ESRI logo and the text "ArcGIS Resource Centers" and "Arc Hydro". Below the header, there are navigation tabs for "Resources Gateway" and "Community". The "Community" tab is selected, leading to a "Template Gallery" section. The gallery title is "Arc Hydro". Below the title, there is a table listing templates. The table has columns for name, rating, date added, product version, author, and downloads. Two templates are listed: "Arc Hydro Chesapeake Bay Viewer" and "Arc Hydro Data Model".

name	rating	date added	product version	author	downloads
Arc Hydro Chesapeake Bay Viewer The Arc Hydro Chesapeake Bay Viewer is an implementation of ArcGIS Server and the ArcGIS API for Flex aimed at watershed management. This viewer incorporates data from authoritative data sources such as the US EPA's STORET Web Service and the USGS's National Water Information System Web Service to give access to water quality and quantity information at the watershed level....	0 Ratings	Dec 08 2009 Updated: Dec 09 2009	9.3.1	ArcHydroTeam	135
Arc Hydro Data Model This Data Model Template provides the content of the Arc Hydro data model in Geodatabase and XML Workspace document formats. This template is intended to be used by people designing and building Arc Hydro Geodatabases. This version of the geodatabase reflects the Arc Hydro design presented at the 2009 ESRI User Conference.	1 Rating	Oct 13 2009	9.3.1	ArcHydroTeam	576



Where to find Data Models

- <http://resources.arcgis.com/content/data-models>



Marine

Energy Utilities

Hydro

Agriculture

Broadband

Address

Forestry

Transportation

Telecommunications

Pipeline

Water Utilities

Fire Service

Health

Other Resources

- <http://support.esri.com> – updated!

Find Resources

Community Content

- Support Blog
- wiki.GIS.com
- Forum Index

Support Links

- Technical Articles
- ArcScripts
- Previous User Forums
- Licensing and Registration
- Support Center Feedback

Support Options


The screenshot shows the ESRI Support website in a Windows Internet Explorer browser window. The address bar displays <http://support.esri.com/en/>. The website features the ESRI logo and the tagline "GIS Software that Gives You THE GEOGRAPHIC ADVANTAGE". A navigation menu includes links for Home, Industries, Products, Training, Support, Services, Events, News, and About ESRI. A search bar is located in the top right corner. The main content area is titled "Support" and includes a search bar labeled "Search Support Pages". Below the search bar, there is a "Support Center Login" section with fields for Username and Password, a "Remember my username" checkbox, and a "Login" button. A warning message states: "For Patches and Service Packs - go to <http://resources.arcgis.com/content/patches-and-service-packs>". There are four tiles for "New Support Request", "My Support Requests", "Contact Tech Support", and "Chat with an Analyst". Below these tiles, there are sections for "Common Issues" and "New Service Packs".

Support Center Login

Username

Password

☐ Remember my username

 **Login**

[Recover Username / Reset Password](#)
[Create a new ESRI Global Account](#)

Find Resources

Community Content

- Support Blog

Common Issues

- Configure a reverse proxy system architecture with ArcGIS Server
- Opening a PDF with Adobe Reader from within the ArcGIS Developer Help System on Windows 7 gives an error

New Service Packs

- PLTS for ArcGIS 9.3.1 Aeronautical Service Pack 1 Patch 1
- ArcGIS Business Analyst Server for the Microsoft .NET Framework 9.3.1 Service Pack 1

Other Resources

- <http://resources.esri.com>

ArcGIS Resource Centers Customer Care | Support | Careers [Login](#)

Learn, Share, Communicate

Geoprocessing is how you compute with data, connecting data to tools to derive new information [Learn More](#)

Products	Functions	User Communities	Solutions
<ul style="list-style-type: none">■ ArcGIS Desktop■ ArcGIS Server■ ArcGIS Engine■ ArcGIS Explorer■ ArcGIS Mobile■ ArcIMS■ MapIt	<ul style="list-style-type: none">■ ArcGIS Online■ Geoprocessing■ Geodatabase & ArcSDE■ Image Management■ CAD Integration■ Mapping & Visualization■ Map Templates■ Enterprise GIS■ SharePoint	<ul style="list-style-type: none">■ Water Utilities■ Java■ Public Safety■ Land Records■ Arc Hydro■ Public Works	<ul style="list-style-type: none">■ Business Analyst Suite

[Feedback](#) | [Contact ESRI](#) | [Copyright © ESRI](#) | [Privacy](#)

- Product information
- Code Galleries
- User Communities
- Help Docs
- Discussion Forums
- Data

Training resources

[***http://www.esri.com/training***](http://www.esri.com/training)

- **Instructor-Led Courses**

- ArcGIS Desktop I: Getting Started with GIS
- ArcGIS Desktop II: Tools and Functionality
- ArcGIS Desktop III: GIS Workflows and Analysis

- **Web-Based Training**

- Getting Started with GIS (free course)
- Learning ArcGIS Desktop
- Planning for a GIS
- GIS for Managers (free training seminar)

Thank You!!!

- Open for questions

